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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/058,810	04/13/1998	UTE NEGELE	225/44173	7867

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EXAMINER

CHEN, VIVIAN

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/058,810

Applicant(s)

NEGELE ET AL.

Examiner

Vivian Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2003 and 22 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28,30,34-51,55 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28,30,34-51,55 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

1. Claims 1-27, 29, 31-33, 52-54 have been cancelled by Applicant.

Claim Rejections - 35 USC § 112

2. The rejections under 35 USC 112, first paragraph, in paragraph 4 of the previous Office Action has been withdrawn in view of Applicant's amendments filed 7/22/2003.

Claim Rejections - 35 USC § 103

3. Claims 28, 30, 34-35, 38-47, 50, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUGIO ET AL (US 4,496,695) in view of SACHDEVA (US 5,260,357).

SUGIO ET AL discloses metal substrates coated with corrosion resistant curable coating and/or adhesive compositions, said compositions comprising a polyfunctional maleimide-functionalized compound as recited in claim 30 and other copolymerizable components such as glycidyl epoxy-based resins and polyfunctional cyanate esters, wherein the coating is applied to a substrate by applying the coating composition in the form of a solvent-based solution, followed by curing the coating at temperatures of 50-400 C or with radiation, wherein the coating composition can also contain additives such as catalysts and dispersants (columns 5-6; lines 63-68, col. 8; lines 40-48, col. 9; line 26, col. 10 to line 10, col. 11; lines 55-68, col. 11) as recited in claims 28, 30, 35, 38-41, 50, 55. However, the reference does not explicitly disclose the recited thickness or pre-coating steps.

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SACHDEVA discloses that it is well known in the art to clean and degrease metal substrates like aluminum prior to the application of corrosion-inhibiting adhesive primers in order to improve interlayer adhesion (lines 20-32, col. 1) as recited in claim 55, 48.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the thickness of the coating layer disclosed in SUGIO ET AL as indicated in claim 34 depending on the adhesive and mechanical properties required by a given usage. It also would have been obvious to apply the compositions using conventional types of coating solutions such as solutions, dispersions or emulsions, and to adjust the concentration of the compositions in such forms as indicated in claims 35, 44 depending on the specific coating method and apparatus used. It would have been obvious to apply additional functional coatings such as curable organic adhesion promoters on the metal substrate prior to coating as indicated in claims 42-46 in order to further improve the adhesion of subsequent coatings, and protective or decorative topcoats as indicated in claim 55, 47 in order to improve durability and visibility.

4. Claims 28, 30, 34-50, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIENERT ET AL (US 5,084,304) in view of SACHDEVA (US 5,260,357).

LIENERT ET AL discloses metal substrates coated with corrosion resistant curable coating compositions, said compositions comprising a polyfunctional bismaleimide compound and other reactive polymeric components such as acrylates and/or styrene, wherein the coating is applied to a substrate by first applying an optional primer coating in solution form, curing the optional primer coat, followed by the application of the bismaleimide-containing coating composition in the form of a solvent-based solution and the curing the said bismaleimide-

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containing coating at typical temperatures of 200-350 C to form a layer having a typical thickness of 4-23 μm , wherein the coating composition optionally contain additives such as peroxide catalysts and wherein the substrate is aluminum and/or automotive components (lines 13-35, col. 2; line 22, col. 10 to line 22, col. 11; lines 36-41, col. 11; line 50, col. 11 to line 30, col. 12) as recited in claims 28, 30, 34-43, 48-50, 55. However, the reference does not explicitly disclose the recited pre-coating steps.

SACHDEVA discloses that it is well known in the art to clean and degrease metal substrates like aluminum prior to the application of corrosion-inhibiting adhesive primers in order to improve interlayer adhesion (lines 20-32, col. 1) as recited in claim 55, 48.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use conventional substrate treatment steps such as pre-cleaning metal substrates prior to applying the coatings of LIENERT ET AL as indicated in claim 55 in order to improve the adhesion of the coatings. It also would have been obvious to adjust the concentration of the coating composition as indicated in claims 35, 44 depending on the specific coating method and equipment used, and also to select the curing temperature as indicated in claims 45-46 depending on the specific formulation and catalysts used. One of ordinary skill in the art would have utilized conventional additives such as dispersants as indicated in claim 39 in order to improve the coating characteristics and uniformity of the disclosed composition. It would have been obvious to utilize additional functional coatings such as protective or decorative topcoats as indicated in claim 55, 47 in order to improve durability and visibility.

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5. Claims 28, 30, 34-35, 38-41, 47-51, 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUZAKI ET AL (US 4,548,986) in view of SACHDEVA (US 5,260,357).

SUZAKI ET AL discloses metal substrates having a multilayer coating comprising a corrosion resistant primer coating and a topcoat, said primer containing a polybismaleimide and optional additives, wherein the primer coating is applied to a substrate by applying said primer coating in solution form, drying and/or baking the optional primer coat at typical temperatures of 80-90 C, followed by the application of a topcoat enamel, wherein the primer has a typical thickness of 5 microns or more (lines 56-60, col. 1; line 28-40, col. 4; lines 27-57, col. 5; Example 1) as recited in claims 28, 30, 34, 38-41, 47-48, 50-51, 55-56. However, the reference does not explicitly disclose the recited pre-coating steps.

SACHDEVA discloses that it is well known in the art to clean and degrease metal substrates like aluminum prior to the application of corrosion-inhibiting adhesive primers in order to improve interlayer adhesion (lines 20-32, col. 1) as recited in claim 55, 48.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use conventional substrate treatment steps such as pre-cleaning metal substrates prior to applying the coatings of SUZAKI ET AL as indicated in claim 55 in order to improve the adhesion of the coatings. It would have been obvious to adjust the concentration of the coating composition as indicated in claim 35 depending on the specific coating method and equipment used. One of ordinary skill in the art would have utilized conventional additives such as dispersants as indicated in claim 39 in order to improve the coating characteristics and uniformity of the disclosed composition. It would have been obvious to apply the disclosed coating system to conventional articles like vehicular components as indicated in claim 49 in

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order to prevent corrosion. It would have been obvious to utilize additional functional coatings such as protective or decorative topcoats as indicated in claim 55, 47 in order to improve durability and visibility.

6. Claims 28, 30, 34-35, 38-41, 47-51, 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over NG (US 5,3778,740) in view of SACHDEVA (US 5,260,357).

NG discloses metal substrates having a corrosion resistant adhesive primer coating and additional layers, said primer containing a polybismaleimide and optional additives such as disperants, wherein the primer coating has a typical solids concentration of 15% or more and is applied to a substrate by applying said primer coating in solution form and allowing to cure at typical temperatures of 176 C, followed by the application of an additional coating and additional layers (lines 15-50, col. 1; lines 52-58, col. 5; lines 55-68, col. 8; column 11; line 36, col. 17 to line 25, col. 18) as recited in claims 28, 30, 34, 38-41, 47-51, 55-56. However, the reference does not explicitly disclose the recited pre-coating steps.

SACHDEVA discloses that it is well known in the art to clean and degrease metal substrates like aluminum prior to the application of corrosion-inhibiting adhesive primers in order to improve interlayer adhesion (lines 20-32, col. 1) as recited in claim 55, 48.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use conventional substrate treatment steps such as pre-cleaning metal substrates prior to applying the coatings of NG as indicated in claim 55 in order to improve the adhesion of the coatings. One of ordinary skill in the art would have adjusted the thickness of the primer layer as indicated in claim 34 depending on the adhesive characteristics required by a

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given usage. It would have been obvious to apply the disclosed coating system to conventional articles like vehicular components as indicated in claim 49 in order to prevent corrosion. It would have been obvious to utilize additional functional coatings such as protective or decorative topcoats as indicated in claim 55, 47 in order to improve durability and visibility.

Response to Arguments

9. Applicant's arguments filed 5/1/2003 and 7/22/2003 have been fully considered but they are not persuasive.

(A) Applicant argues that SUGIO ET AL and LIENERT ET AL and SUZUKI ET AL and NG each fail to disclose the claimed inventions because the references do not disclose an adhesion-promoting coating consisting essentially of the recited polybismaleimide compounds. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a *coating* that consists essentially of the specified polybismaleimide compounds alone) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The "consists essentially of" language in claims 28 and 55 only limit the composition of the "at least one organic adhesion-conferring polymer" and therefore does not limit the composition of the bond coating as a whole or the presence of additional adhesion-conferring polymers. Furthermore, claim 51 utilizes only the language "comprises" and thereby also does not limit the composition of the bond coating as a whole or the presence of additional adhesion-conferring polymers. If Applicant desires to limit the composition of the

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bond coating itself to the recited polybismaleimide compounds, language such as "a bonding coating consisting essentially of at least one organic adhesion-conferring polymer, said adhesion-conferring polymer(s) consisting essentially of..." is necessary to preclude the presence of other polymeric components. The Examiner reminds Applicant that such claim language needs to be fully supported by the specification as originally filed (i.e., no new matter).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (703) 305-3551. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

September 25, 2003



Vivian Chen
Primary Examiner
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